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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 09/891,606 | 06/27/2001 | Manabu Taniguchi | K06-135818M/TBS | 8823 |
| 21254 | 7590 | 03/02/2005 | | EXAMINER |
| MCGINN & GIBB, PLLC 8321 OLD COURTHOUSE ROAD SUITE 200 VIENNA, VA 22182-3817 | | | TAMAI, KARL I | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2834 | |

DATE MAILED: 03/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 09/891,606 | TANIGUCHI ET AL. | |
| | Examiner | Art Unit | |
| | Tamai IE Karl | 2834 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 14 December 2004.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-26 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-26 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 27 June 2001 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The new title ““MAGNETIC BEARING CONTROL DEVICE WITH COUNTER FOR TIMED MAINTENANCE” has been entered into the file wrapper. The requirement of a new title is withdrawn.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the counter based on the magnetic bearing control signal from the DSP must be shown or the feature canceled from the claims. No new matter should be entered.

The examiner notes the magnetic bearing “control current signal” is shown input to the D/A converter 13 from the DSP 15, with no connection showing the counter 14 being based on the magnetic bearing current control signal.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering

of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The objection to Claims 1-19 is withdrawn. The examiner assumes that the magnet bearing current control signal is the magnetic bearing control signal of set forth in the claims, as there seems to be no other magnetic bearing control signal to provide the antecedent basis for the claimed language. Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1, 3, 5, 7, 9, 10, 11, 12, 15, 16, 17, 18, 19, 22, 23, 25, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamiyama et al. (Kamiyama)(JP 09-177781) and Hansen et al. (US 4,539,632). Kamiyama teaches that magnetic bearings(including DSP and drive signal) requires need periodic maintenance, but does not teach a counter to signal an alarm when a counter determines a preset time has elapsed. Hansen teaches a digital programmable counter 32 to count the total elapsed operating time (drive signal) for electric machines (col. 3, line 51), and generating an alarm. The broad teaching of Hansen teaches the timer for any industrial machine. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the magnetic bearings requiring periodic maintenance of Kamiyama with the timer of Hansen to accurately provide periodic maintenance to the bearings, as taught by Hansen.

In regards to claims 22, 23, 25, and 26, the examiner notes that Hansen is counting the operating time of the system to be maintained, while Kamiyama teaches that the system requiring maintenance is the magnetic bearings. The DSP of Hansen is counting the actual work/operating time of the magnetic bearings of Kamiyama which is inherently "based" on the magnetic bearing control signal.

7. Claims 2, 4, 8, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamiyama et al. (Kamiyama)(JP 09-177781) and Hansen et al. (US 4,539,632), in further view of Nakamura (JP 02-176,218). Kamiyama and Hansen teach every aspect of the invention except the DSP inhibiting the activation of the magnetic bearings. Nakamura teaches that the bearing control circuit include a signal that prevents activation of the bearings in poor condition. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Kamiyama and Hansen with a DSP having activation prevention signal because Nakamura teaches that the magnetic bearings should not be operated in a poor condition.

8. Claims 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamiyama et al. (Kamiyama)(JP 09-177781) and Hansen et al. (US 4,539,632), in further view of Yamada et al. (Yamada)(US 6,421,630). Kamiyama and Hansen teach every aspect of the invention except a voice output at the start of the maintenance operation. Yamada teaches the displayed alarm can be either a message on a display, an audible alarm or a voice alarm. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Kamiyama and Hansen with voice output at the start of the maintenance operation to warn that the operational time has expired, because it is within the ordinary skill in the art at the time of the invention to choose between known equivalents, where Yamada teaches the equivalence of the display being audible, voice, or visual.

9. Claims 20, 21, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamiyama et al. (Kamiyama)(JP 09-177781) and Hansen et al. (US 4,539,632), in further view of Marsh (US 4811249). Kamiyama and Hansen teach every aspect of the invention except the DSP outing an instruction to the counter to count the actual work time of the magnetic bearing. Hansen teaches the DSP performs the counting of the actual work time of the device. Marsh teaches the equivalence of the DSP having an separate counter requiring and input and output, and the DSP being an internal counter, see col. 4, line 30). It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Kamiyama and Hansen with an output to a counter for counting the actual worktime, because Marsh teaches the counter can be a separate unit, and because a separate unit would allow for repair and upgrades to the counter or DSP.

Response to Arguments

10. Applicant's arguments filed 12/14/04 have been fully considered but they are moot in view of the new grounds of rejection. Applicant's argument regarding the lack of motivation to combine Kamiyama and Hansen is not persuasive. The examiner provided the Applicant with the US equivalent to Kamiyama, which is the US 6,320,289. Ueyama (US 6,320,289) in the last office action. Ueyama clearly and literally recites the need for maintenance of magnetic bearings (col 1, line 27-42), and Hansen clearly and literally teaches the maintenance timer for any industrial equipment (col. 3, line 22-23).

It is would have been clearly obvious to a person of ordinary skill in the art to combine the magnetic bearing control circuit of Kamiyama/Ueyama which requires periodic adjustment and upgrading with the timer of Hanson to provide an alarm after a preselected operating period. Kamiyama was relied upon in the rejection merely because it was published one year prior to the US filing date and thus cannot be overcome as prior art by a certified translation of the parent application or a sworn affidavit/declaration. The rejection is proper and maintained.

Conclusion

11. Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl I.E. Tamai whose telephone number is (571) 272 - 2036.

The examiner can be normally contacted on Monday through Friday from 8:00 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Darren Schuberg, can be reached at (571) 272 - 2044. The facsimile number for the Group is (703) 872 - 9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Karl I Tamai
PRIMARY PATENT EXAMINER
February 22, 2005


KARL TAMAI
PRIMARY EXAMINER